

**COOPERATIVE AGREEMENT**  
**BETWEEN**  
**THE STATE OF LOUISIANA**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**AND**  
**THE UNITED STATES**  
**ENVIRONMENTAL PROTECTION AGENCY**  
**AND**  
**THE DOW CHEMICAL COMPANY**  
**IN THE MATTER OF**  
**THE PLAQUEMINE AQUIFER**

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**I. PARTIES**

The Louisiana Department of Environmental Quality (hereinafter "LDEQ"), the United States Environmental Protection Agency (hereinafter "EPA"), and The Dow Chemical Company (hereinafter "Dow") who by the signature of their duly authorized and empowered agents, agree to the terms and conditions of this Cooperative Agreement.

Dow denies that its manufacturing site is a source of any contaminants detected in the Plaquemine Aquifer. Dow further denies any and all liability for any contaminants detected in the Plaquemine Aquifer. While Dow disclaims any responsibility for any contamination detected in the Plaquemine Aquifer, Dow, as a good corporate citizen and member of the community of Plaquemine, Louisiana, wants safe, good quality water for the community of Plaquemine and wants to continue to do its part to help the community. To be part of a solution for water quality issues in the community of Plaquemine, Dow has entered into this Cooperative Agreement.

**II. OBJECTIVES**

In entering into this Cooperative Agreement, the mutual objectives of the LDEQ, EPA, and Dow are to: 1) Investigate and plan for the continued protection of the City of Plaquemine's (hereinafter "City") water supply from contaminants in the Plaquemine Aquifer, 2) Perform monitoring of the Plaquemine Aquifer, and (3) Perform a remediation study (hereinafter "Remediation Study") to assess the long-term need for remediation and, if necessary, to evaluate options for remediation.

### **III. WORK TO BE PERFORMED**

It is hereby AGREED that Dow, through its agents or its contractors, shall perform the following work:

1. Investigate and plan for the continued protection of the City's water supply from contaminants in the Plaquemine Aquifer, by doing the following:

A. Dow through its agents or its contractors will conduct a study of the current capability of the City's water treatment facility to treat contaminants, subject to Safe Drinking Water Act standards, that have been detected in the Plaquemine Aquifer, to below the Maximum Contaminant Levels (hereafter "MCLs") for those contaminants.

B. If the study conducted in "A" above reveals that the City is currently unable to treat contaminants to below MCLs for contaminants currently in the Plaquemine Aquifer, then Dow, through its agents or contractors, shall supplement the study to assess the feasibility of various options, technological or other, to enhance the current water treatment capability of the City. "Other options," as used above may include the feasibility of use of alternative water supplies other than the Plaquemine Aquifer in lieu of, or in supplementation of, additional treatment capability. Additionally, the costs and benefits of each option should be assessed as part of this study. Dow shall make a recommendation to EPA and LDEQ on the best option for continued protection of the City's water supply should contaminants that have been detected previously in the Plaquemine Aquifer be detected, at or above MCLs, in the City's Sentinel Well System. Dow may make contingent recommendations based on various scenarios, such as different levels of contamination, that may potentially arise. Additionally, Dow may recommend that no additional activity is needed in a given situation based on the City's ability to currently treat contaminants.

C. If contaminants, subject to Safe Drinking Water Standards and previously detected in the Plaquemine Aquifer, are detected in the Plaquemine Aquifer, at or above MCLs, in any of the City's four sentinel wells, i.e., SW-1, SW-2, SW-3 and SW-4, which were installed as an early detection unit for the City's water supply (hereafter the "Sentinel Well System"), and said detection(s) have been confirmed pursuant to quality assurance/quality control procedures, then EPA and LDEQ will jointly select an appropriate remedy. If the recommendation made by Dow in Part B above is selected as the remedy, then Dow agrees to fully implement that remedy, whether Dow provides funds to a third-party or conducts the work itself. However, if LDEQ and EPA select a remedy, other than the remedy recommended by Dow, then Dow is not required by this Cooperative Agreement to implement the selected remedy. In the situation where contaminants, subject to Safe Drinking Water Standards and previously detected in the Plaquemine Aquifer, are detected in the Plaquemine Aquifer, at or above MCLs, but the study described in Parts A and B above has not been concluded, then EPA, LDEQ, and Dow shall re-assess the situation, however, Dow will not be responsible for implementing any remedy unless the study has been completed and Dow has made a recommendation. In that situation (where the study is not complete), or where EPA and LDEQ select a remedy that was not recommended by Dow, then each party is free to terminate the Cooperative Agreement.

D. All activities to be performed under this Section by Dow, Dow's agents or contractors, shall be contingent upon the parties' receipt of written concurrence by the City that the City agrees to the activities required under this Cooperative Agreement.

2. Perform monitoring of the Plaquemine Aquifer by doing the following:

A. Dow through its agents or its contractors will perform semi-annual monitoring of the nineteen (19) wells (including the Sentinel Well System) that are currently being monitored on a semi-annual basis by LDEQ subject to EPA and LDEQ oversight. The Sentinel Well System shall be monitored quarterly. Said 19 wells will be monitored for contaminants subject to the Safe Drinking Water Act that have been detected in the Plaquemine Aquifer. Any well in the Sentinel Well System, where an MCL for contaminants subject to the Safe Drinking Water Act has been exceeded, must be resampled as soon as practicable to confirm that the MCL has been exceeded.

B. Dow shall begin monitoring in the next period following the effective date of this Cooperative Agreement, provided the Work Plan for monitoring has been approved. The monitoring required under this section shall terminate no sooner than four quarters after EPA and LDEQ select a long-term remediation option. In the event such selection (of long-term remediation option) is not made within one year of submission by Dow, then Dow may terminate this Cooperative Agreement.

3. Perform a Remediation Study to evaluate the long-term need for remediation and, if necessary, to evaluate options for remediation by doing the following:

A. Dow will perform a Remediation Study to evaluate the long-term need for remediation of the Plaquemine Aquifer, if necessary, and identify remediation options currently available. The Remediation Study should evaluate, at a minimum, the following remediation options:

1. Monitoring and natural attenuation;
2. Chemical injection;
3. Biostimulation; and
4. No further action.

#### **IV. ACCESS**

If any third party access agreements are necessary for implementation of this Cooperative Agreement, EPA and LDEQ agree to assist expeditiously in obtaining any third party access agreements. All access agreements shall provide for access by EPA, LDEQ and Dow, including contractors to each party. Failure by Dow to obtain a necessary third party agreement, after use of all reasonable efforts, shall constitute a *force majeure* event and the affected work will be delayed until the appropriate third party access agreement is obtained.

## **V. QUALIFIED PROFESSIONALS**

All work performed pursuant to this Cooperative Agreement shall be under the direction and supervision of a qualified professional with expertise in environmental site investigation, risk evaluation and/or remediation.

## **VI. WORK PLANS**

Dow will be required to submit work plans as specified in this Cooperative Agreement. Work plans should be submitted for each of the three areas of work performed (i.e. Water supply protection, Monitoring, and Remediation Study) by Dow and required under this Cooperative Agreement as described in Section III "WORK TO BE PERFORMED." The three work plans developed under this Cooperative Agreement should include:

1. a summary of the issue or issues being addressed, including a scope and description of the project; identification of objectives and anticipated results, and identification of interim and final products or deliverables;
2. an outline of the overall technical approach and details on methodology, as appropriate;
3. corresponding personnel requirements, proposed contractors, and an organizational chart for all parties involved in implementing the work plan;
4. project/activity schedules and milestone charts for each project;
5. a schedule of deliverables/submittals and their due dates, including progress reports;
6. a health and safety plan, as appropriate to Dow's activities in implementing the terms of this Cooperative Agreement;
7. a Quality Assurance/Quality Control and Data Validation/Evaluation plan; and
8. any and all other requirements of this Cooperative Agreement.

All work plans required under this Cooperative Agreement shall be submitted to EPA and LDEQ within 60 days of the effective date of this Cooperative Agreement except that the work plan for the study described in Section III above (relating to the City's water system) will be submitted within 60 days of receipt of concurrence by the City for such a study. As described below, in Section VIII., EPA and LDEQ shall review and comment upon work plans and reports submitted by Dow.

## **VII. LDEQ/EPA COMMENTS ON SUBMITTED DOCUMENTS**

LDEQ and EPA shall review and provide any written comments on the work plans, reports (except progress reports), and other documents prepared by Dow within a reasonable time, but no later than forty-five (45) calendar days after receipt by EPA and LDEQ. Within thirty (30) calendar days of receipt of any timely comments by either agency, Dow shall either amend and

submit to LDEQ and EPA a revised document, or notify LDEQ and EPA in writing of the reasons for not adopting LDEQ's or EPA's comments. In the event that LDEQ and EPA are not satisfied with the revised document/response, then LDEQ and EPA either may either accept, elaborate on their comments, or issue a notice of nonacceptance.

### **VIII. SAMPLING/ANALYSIS, ACCESS AND DATA AVAILABILITY**

Dow shall make available to LDEQ and EPA the results of all sampling and/or tests or other data generated by Dow in implementing this Cooperative Agreement. Dow shall provide written notification to LDEQ and EPA of the availability of all data within ten (10) calendar days after receipt by Dow. Upon written request by LDEQ or EPA, all data shall be made available for review and inspection by LDEQ or EPA within two (2) calendar days. Upon written request by LDEQ or EPA, Dow shall submit any data to LDEQ or EPA within ten (10) calendar days of receipt of the request.

It is understood by LDEQ and EPA that any non-validated data submittals may contain inaccuracies or other inappropriate analytical results because such information has not been validated. Accordingly, such non-validated data will not be incorporated into any official finding of LDEQ or EPA or report provided by Dow hereunder until such validation has been performed. Dow shall provide such validation no later than thirty (30) calendar days following Dow's receipt of the non-validated data from the laboratory. If any re-sampling is required, Dow shall notify LDEQ and EPA in writing ten (10) business days of determination that such resampling is required along with a written statement of the reason(s) that resampling is required.

LDEQ and EPA shall make available to Dow the results of sampling and/or tests or other data generated by LDEQ or EPA.

Dow shall notify LDEQ and EPA not less than three (3) business days in advance of any planned sample collection activity and as soon as possible of any unplanned or emergency sample collection activity. At the request of LDEQ or EPA, Dow shall allow split or duplicate samples to be taken by LDEQ or EPA and/or their authorized representatives, including the City, of any samples collected by Dow, or on Dow's behalf, pursuant to the implementation of this Cooperative Agreement.

LDEQ and EPA shall notify Dow not less than three (3) business days in advance of any planned sample collection activity and as soon as possible of any unplanned or emergency sample collection activity. At the request of Dow, LDEQ and EPA shall allow split or duplicate samples to be taken by Dow of any samples collected by LDEQ or EPA during the performance of the work associated with this Cooperative Agreement.

### **IX. PROGRESS REPORTS**

Dow shall provide written progress reports to LDEQ and EPA for the first three months after the effective date of this Cooperative Agreement, Dow shall provide, at a minimum, monthly progress reports that will be due on the tenth day (10<sup>th</sup>) of the next month following the period covered by the Progress Report. Thereafter, Dow shall supply Progress Reports quarterly, until completion of all requirements under this Cooperative Agreement. At a minimum, these progress reports shall: (1)

describe all data gathering and planning; (2) contain a status report on all field activities; and (3) include all results from sampling and analysis, and all other data received by Dow pertinent to any work performed under this Cooperative Agreement. Progress reports shall be submitted to LDEQ and EPA by the thirtieth (30th) calendar day of the next month of each quarter following the effective date of this Cooperative Agreement.

## **X. RECORD PRESERVATION**

LDEQ, EPA, and Dow agree that they shall preserve, despite any document retention policy to the contrary, all records and documents in their possession or in the possession of their divisions, employees, agents, or contractors which are pertinent in any way to work undertaken pursuant to this Cooperative Agreement. Documents previously supplied to LDEQ or EPA may be excluded. This shall not apply to attorney work-product or attorney-client privileged documents.

One copy of each of these documents shall be retained during the course of implementing the work under this Cooperative Agreement and for a minimum of three (3) years after these projects have been fully completed per the Cooperative Agreement. After the three (3) year period, following completion of the project, upon written request, Dow may request approval by EPA and LDEQ to forego retention of the documents.

## **XI. OFFICIAL ADDRESSES OF THE PARTIES**

Correspondence (including acceptance letters, nonacceptance letters, etc.) and other documents to be submitted pursuant to this Cooperative Agreement, including Work Plans and reports, shall be sent to the following addresses or to such other addresses as Dow, LDEQ, or EPA hereafter may designate in writing:

Dow:

Mr. Dennis Davis  
P.O. Box 150  
Building #3502  
Plaquemine, LA 70765-0150

LDEQ:

Mr. Wilbert Jordan, Junior, Assistant Secretary  
Office of Environmental Assessment  
Department of Environmental Quality  
P.O. Box 4314  
Baton Rouge, Louisiana 70821-4314

EPA:

Mr. Mark Potts, Chief  
Hazardous Waste Enforcement Branch

Compliance Assurance and Enforcement Division  
Region 6  
U.S. Environmental Protection Agency  
1445 Ross Avenue, Suite 1200

Dallas, Texas 75202-2733

## **XII. DISPUTE RESOLUTION**

If Dow objects to any EPA or LDEQ written notice or nonacceptance or decision made pursuant to this Cooperative Agreement, then Dow shall notify EPA and LDEQ in writing of its objection within ten (10) calendar days of receipt of such notice or decision. EPA, LDEQ and Dow shall then have an

additional thirty (30) calendar days, from the receipt by LDEQ and EPA of the notification of objection, to reach an agreement. If an agreement cannot be reached on the issue within this thirty (30) day calendar day period, then EPA and LDEQ shall provide a written statement of its decision to

Dow within ten (10) calendar days of the expiration of the 30 day period. If Dow continues to object to the EPA and LDEQ decision, then Dow shall notify EPA and LDEQ in writing within twenty (20) calendar days after receipt of the EPA and LDEQ written statement of its decision, exclusive of date of receipt, and request a meeting with appropriate individuals in senior management of both LDEQ and EPA, which shall take place no later than forty-five days (45) after the request is received by both EPA and LDEQ. If the matter is not resolved by this meeting, then any party may terminate this Cooperative Agreement upon written notice to each party.

## **XIII. RESERVATION OF RIGHTS**

Any party to this Cooperative Agreement may terminate the Cooperative Agreement at any time under the following conditions: 1) this Cooperative Agreement may be terminated when any party fails to perform as required by the terms of this Cooperative Agreement; and 2) this Cooperative Agreement may be terminated immediately and without notice when human health or the environment are substantially endangered.

Each party to the Cooperative Agreement retains whatever rights it had before the Cooperative Agreement was effective. Nothing in this Cooperative Agreement should be construed to terminate, limit, or otherwise modify any right by any party to the Cooperative Agreement. If this Cooperative Agreement is terminated prior to completion of all activities required under this Cooperative Agreement, then all parties retain any and all rights they had prior to this Cooperative Agreement becoming effective.

During the term of this Cooperative Agreement no party shall be limited by the Cooperative Agreement for matters that arise outside the scope of this Cooperative Agreement. Notwithstanding any provision to the contrary, Dow expressly reserves all rights that it has or may have to assert claims by, in or through any and all administrative and/or judicial procedures to challenge any groundwater reports or model(s), including but not limited to groundwater flow direction and/or fate and transport model(s) or reports, relative to the Plaquemine Aquifer, prepared by or at the direction of LDEQ or EPA and any report(s) utilizing or referencing such model(s) (collectively referred to

hereafter as ‘the model’). Dow also reserves all rights that it has or may have to assert claims against any and all persons or entities for matters arising out of any contamination of the Plaquemine Aquifer including but not limited to claims for breach of contract, indemnity, contribution, nuisance and claims under federal, state and local law.

#### **XIV. NO ADMISSION OF LIABILITY**

Nothing contained herein, or participation in this process, shall constitute an admission of liability by Dow of the violation of any statute, regulation, ordinance, law or standard, or an admission of responsibility for any contamination of the Plaquemine Aquifer which may exist now or in the future. Dow denies that its manufacturing site is a source of any contamination in the Plaquemine Aquifer. Dow further denies any and all liability for any contamination in the Plaquemine Aquifer. Dow specifically denies any and all liability for any allegations made in the actions entitled Noretta Thomas, et al v. A. Wilbert & Sons, L.L.C., et al, and Consolidated Matters, Suit no. 55,127 “B,” 18<sup>th</sup> Judicial District Court, Parish of Iberville, State of Louisiana; Troy Robichaux, et al, v. State of Louisiana, through the Department of Human Health and Hospitals and the Department of Environmental Quality, et al, Suit no. 56,803, Division A, 18<sup>th</sup> Judicial District Court, Parish of Iberville, State of Louisiana; and Ada M. Anderson, et al, v. The Dow Chemical Company, Civil Action No. 02-12-C-M1, United States District Court, Middle District of Louisiana, or that may be made in any other actions relating to contamination of the Plaquemine Aquifer. The EPA, LDEQ and Dow recognize and acknowledge that this Cooperative Agreement has been negotiated in good faith and that the actions to be undertaken by Dow do not constitute any admission of any liability or responsibility by Dow. Neither this Cooperative Agreement, nor the fact of Dow’s participation in this process shall be admitted as evidence of any admission or as a declaration against interest by Dow in any proceeding. This Cooperative Agreement may be admitted as evidence of its terms in any proceeding instituted by the parties. Dow does not admit and retains the right to controvert and dispute any and all allegation(s) of any violation(s) by Dow in any pending or subsequent proceedings.

#### **XV. FORBEARANCE OF ACTION**

Notwithstanding any provision to the contrary, during the term of this Cooperative Agreement, LDEQ and EPA agree not to institute any enforcement action(s), including but not limited to a section 3007 request for information pursuant to 42 U.S.C. 6927, which relate to the known and existing, contaminant plume or plumes in the Plaquemine Aquifer that have been the subject of the Agencies’ on-going investigation. However, if Dow elects to seek judicial review or judicial recourse, or other actions, (with the exception of an administrative challenge made pursuant to the Information Quality Act) against LDEQ or EPA, then LDEQ and EPA reserve the right to defend against such actions, including taking enforcement actions. In such a circumstance any party to this Cooperative Agreement may opt to terminate this Cooperative Agreement.

The foregoing provision shall not constitute a waiver of Dow’s right to appeal or seek judicial recourse in any matter. Notwithstanding any provision to the contrary, Dow expressly reserves all rights that it has or may have to assert claims by, in or through any and all administrative and/or judicial procedures to challenge any groundwater model(s) or reports, including but not limited to



groundwater flow direction and/or fate and transport model(s) or reports, relative to the Plaquemine Aquifer, prepared by or at the direction of LDEQ or EPA and any report(s) utilizing or referencing such model(s) (collectively referred to hereafter as “the model”).

## **XVI. INTERVENTION**

The EPA and LDEQ agree that both shall consider intervention in any proceeding that may relate to this Cooperative Agreement. No party may be forced to intervene in any proceeding.

## **XVII. OTHER APPLICABLE LAWS**

All actions required to be taken pursuant to this Agreement shall be undertaken in accordance with requirements of all applicable local, state, and federal laws and regulations. Notwithstanding the foregoing, this Cooperative Agreement shall be interpreted and construed in accordance with the laws of the State of Louisiana applicable to the interpretation and construction of contracts.

## **XVIII. EFFECTIVE DATE AND SUBSEQUENT NOTIFICATION**

The effective date of this Cooperative Agreement shall be the last date on which LDEQ, EPA, and Dow have signed this Cooperative Agreement.

This Cooperative Agreement may only be amended by mutual agreement of LDEQ, EPA, and Dow. Such amendments shall be in writing. The effective date for an amended Cooperative Agreement shall be the last date on which LDEQ, EPA, and Dow have signed the written, amended Cooperative Agreement.

No informal advice, guidance, suggestions, or comments by LDEQ or EPA regarding reports, plans, specifications, schedules, or any other writing submitted by Dow will be construed as relieving Dow of its obligations to obtain such formal acceptance as may be required by this Cooperative Agreement or as an amendment to this Cooperative Agreement unless formally agreed to by all parties to this Cooperative Agreement.

Any reports, plans, specifications, schedules and attachments required by this Cooperative Agreement are, upon acceptance by EPA and LDEQ, incorporated into this Cooperative Agreement.

## **XIX. FORCE MAJEURE**

Dow shall be excused from performing the activities called for under this Cooperative Agreement if such performance is prevented or delayed by circumstances which constitute *force majeure*. For purposes of this Cooperative Agreement, *force majeure* is any circumstance beyond Dow’s reasonable control despite Dow’s due diligence and good faith efforts, including weather and acts of God. In the event of *force majeure*, the time for performance of any activity delayed by the *force majeure* shall be extended for this time period of the delay attributable to the *force majeure* event and the time for performance of any activity dependent upon the delayed activity shall be similarly extended. Dow shall notify EPA and LDEQ in writing as soon as reasonably possible after Dow

becomes aware of a circumstance which may delay or prevent (or has delayed or prevent) performance of any activity under this Cooperative Agreement. The notice shall state the cause and anticipated length of the delay, the measures taken by Dow to prevent or minimize such delay and a timetable outlining when such measures were or will be taken.

## **XX. TERMINATION AND SATISFACTION**

This Cooperative Agreement shall be deemed satisfied and terminated upon Dow's receipt of written notice from LDEQ and EPA that Dow has completed all of the tasks of this Cooperative Agreement. Notwithstanding the foregoing, at any such time as Dow believes that it has complied with all terms and conditions of this Cooperative Agreement, Dow may, in writing, request that EPA and LDEQ determine whether this Cooperative Agreement has been satisfied. EPA and LDEQ shall respond to said request within thirty (30) days of the receipt of the request.

## **XXI. PARTIES BOUND**

Any person's signature to the attached "Signature Page to the Cooperative Agreement" shall constitute an agreement by that person, as agent for a principal, to be bound by the terms and conditions of this Cooperative Agreement.

This Cooperative Agreement shall apply to and be binding upon Dow, LDEQ, and EPA, their agents, successors and assigns and upon all persons, contractors, and consultants acting under, or for Dow, LDEQ, or EPA.

No change in ownership or change in corporate or partnership status will in any way alter the status of Dow or in any way alter Dow's responsibility under this Cooperative Agreement.

## **Signature page to the Cooperative Agreement**

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Date

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Dow Chemical Company

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Date

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Louisiana Department of Environmental Quality

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Date

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Louisiana Department of Environmental Quality